



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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**Allen County Regional Water & Sewer District**  
**Sewer Extensions to Six Areas & Treatment at Fort Wayne Wastewater Treatment Plant**  
**State Revolving Fund Project # WW09 125 02 03**

**DATE: May 27, 2010**

**COMMENTS MUST BE RECEIVED BY: June 28, 2010**

#### I. INTRODUCTION

The above entity has applied to the State Revolving Fund Loan Program (SRF) for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

**Max Henschen**  
**Senior Environmental Manager**  
**State Revolving Fund -- IGCN 1275**  
**100 N. Senate Ave.**  
**Indianapolis, IN 46204**  
**317-232-8623**

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# ENVIRONMENTAL ASSESSMENT

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## I. PROJECT IDENTIFICATION

|                            |                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name:              | <b>Proposed Sewer Extensions to Six Areas</b><br>Allen County Regional Water & Sewer District<br>P.O. Box 11888<br>Fort Wayne, IN 46861-1888 |
| SRF Project Number:        | WW09 125 02 03                                                                                                                               |
| Authorized Representative: | Ric Zehr, President<br>Board of Trustees                                                                                                     |

## II. PROJECT LOCATION

Allen County Regional Water & Sewer District (ACRW&SD) is located in Allen County in northwest Indiana. The ACRW&SD study area and 20-year service area are one and the same and include all of the unincorporated areas within Allen County. The project proposes to install sanitary sewer systems in six project areas: (1) Cedar Shores Addition - Cedar Canyons Addition in the Cedarville USGS quadrangle, Cedar Creek Township, T32N, R13E, section 18, 19 and 30, and in Perry Township T32N, R13E sections 13, 24 and 25; (2) Leo Road Area in the Cedarville USGS quadrangle, Cedar Creek Township, T32N, R13E, section 31; (3) Maples Road – Hughes Drive Area in the Fort Wayne East USGS quadrangle, Adams Township, T30N, R13E, section 31, and Marion Township, T29N, R13E section 6, and Pleasant Township, T29N, R13E, section 1, and Wayne Township, T30N, R12E, section 36; (4) Plantation Park Addition – Huguenard Road Area in the Huntertown USGS quadrangle, Washington Township, T31N, R12E, sections 4 and 5; (5) Winchester Road – Kinnerk Road – Allison Avenue – Boggs Avenue Area in the Fort Wayne West USGS quadrangle, Wayne Township, T30N, R12E, sections 26, 34 and 35; and (6) Winters Road Area in the Ossian USGS quadrangle, Lafayette Township, T29N, R11E, sections 12 and 13, and Pleasant Township, T29N, R12E, sections 13 and 18 (see figures 2, and 25A through 30A).

## III. PROJECT NEED AND PURPOSE

Due to failing septic systems and more stringent septic system regulations, the District has been approached on a regular basis by residents within the county to have sewers extended to their areas. The following areas are currently seeking sanitary sewers:

The Cedar Canyons Addition has 47 individual on-site septic systems. Twenty-five structures have a filter bed system; 80 percent were installed prior to 1985. The Fort Wayne – Allen County Department of Health (DOH) has documented six confirmed failures.

The Cedar Shores Addition has 59 individual on-site septic systems. Twenty-five structures have a filter bed system; 36 percent were installed prior to 1985.

The Leo Road Area has nine individual on-site septic systems. Five structures have filter bed systems; 40 percent were installed prior to 1985. The DOH has documented eight confirmed failures.

The Maple Road – Hughes Road Area has 62 individual on-site septic systems. Forty-eight structures have a filter bed system; 61 percent were installed prior to 1985. The DOH has documented 20 confirmed structures with failed systems.

The Plantation Park Addition – Huguenard Road Area has 42 individual on-site septic systems. Thirty-six structures have a filter bed system; 78 percent were installed prior to 1985. The DOH has confirmed five structures with failed systems.

The Winchester Road-Kinnerk Road – Allison Avenue – Boggs Avenue Area has 42 individual on-site septic systems. Seventeen structures have a filter bed system; 71 percent were installed prior to 1985. The DOH has confirmed four structures with failed systems.

The Winters Road Area has eight individual on-site septic systems. Two structures have a filter system; all were installed prior to 1985.

The DOH investigated the on-site systems in each of the six proposed service areas. In correspondence dated March 5, 2009, the DOH stated: *"...this Department has documentation of failed septic systems that are creating public health hazards in all of these areas. Further, we recognize public sewer as the best solution to the problems in these areas, and fully support the ACRW&SD in their on-going efforts to eliminate these areas with non-point source pollutants."*

#### IV. PROJECT DESCRIPTION

The proposed project will provide municipal sanitary sewer service to the six areas described above. The District intends to install gravity or low-pressure sanitary sewer collection systems; the systems will connect with Fort Wayne and be treated at the city's treatment plant.

A. Cedar Canyons Addition – Cedar Shores Addition sanitary sewer system includes:

1. Approximately 1,770 feet of 15-inch polyvinyl chloride (PVC) sanitary sewer;
2. Approximately 730 feet of 12-inch PVC sanitary sewer;
3. Approximately 1,910 feet of 10-inch PVC sanitary sewer;
4. Approximately 5,045 feet of 8-inch PVC sanitary sewer;
5. Approximately 12,610 feet of 8-inch PVC force main;
6. Approximately 2,730 feet of 3-inch PVC force main;
7. Approximately 2,495 feet of 2-inch PVC force main;
8. Approximately 755 feet of 1½ -inch of PVC force main;
9. Approximately 33 manholes;
10. Approximately nine air release valves;
11. Approximately 26 grinder pump stations rated at 30 gallons per minute (gpm) each with electrical connections and 1½-inch check valve assemblies;
12. Approximately three 15-inch by 6-inch wyes;
13. Approximately three 12-inch by 6-inch wyes;
14. Approximately 55 8-inch by 6-inch wyes;
15. Approximately 1,700 feet of 6-inch PVC service laterals (open cut);
16. Approximately 260 feet of 4-inch PVC service laterals (open cut);
17. Approximately 12,650 cubic yards of special backfill;
18. Approximately 375 square yards of asphalt driveway repair;

19. Approximately 200 square yards of concrete driveway repair;
20. Approximately 975 square yards of asphalt pavement replacement;
21. Approximately nine electrical service drops;
22. Approximately 8,300 feet of electrical conductor; and
23. One submersible type lift station with two pumps rated at 325 gpm each.

B. Leo Road Area sanitary sewer system includes :

1. Approximately 790 feet of 8-inch PVC sanitary sewer;
2. Approximately 795 feet of 2-inch PVC force main;
3. Approximately four manholes;
4. Approximately three grinder pump station rated at 30 gallons per minute (gpm) each with electrical connections and 1½-inch check valve assemblies;
5. Approximately 10 feet of 1½ inch pressure service line;
6. Approximately four 8-inch by 6-inch wyes;
7. Approximately 40 feet of 6-inch PVC service laterals (open cut);
8. Approximately 20 feet of 4-inch service laterals (open cut);
9. Approximately 110 cubic yards of special backfill;
10. Approximately 15 square yards of asphalt driveway repair;
11. Approximately 60 square yards of concrete driveway repair;
12. Approximately one electrical service drop; and
13. Approximately 755 feet of electrical conductor cable.

C. Maples Road – Hughes Drive Area sanitary sewer system includes:

1. Approximately 6,425 feet of 8-inch PVC sanitary sewer;
2. Approximately 1,275 feet of 4-inch PVC force main;
3. Approximately 21 manholes;
4. Approximately two grinder pump stations rated at 30 gpm each with electrical connections and 1½-inch check valve assemblies;
5. Approximately 45 feet of 1½-inch pressure service line (open cut);
6. Approximately sixty 8-inch by 6-inch wyes;
7. Approximately 1,600 feet of 6-inch PVC service laterals (open cut);
8. Approximately 2,710 cubic yards of special backfill;
9. Approximately 100 square yards of asphalt driveway repair;
10. Approximately 125 square yards of concrete driveway repair;
11. Approximately 1,600 square yards of asphalt pavement replacement;
12. Approximately one electrical service drop; and
13. Approximately 240 feet of electrical conductor cable.

D. Planter Parkway Addition – Huguenard Road Area sanitary sewer system includes:

1. Approximately 4,035 feet of 15-inch PVC sanitary sewer;
2. Approximately 2,240 feet of 8-inch PVC sanitary sewer;
3. Approximately 775 feet of 2-inch PVC force main;
4. Approximately 21 manholes;
5. Approximately six grinder pump stations rated at 30 gpm each with electrical connections and 1½-inch check valve assemblies;
6. Approximately 240 feet of 1½-inch pressure service line;
7. Approximately twelve 15-inch x 6-inch wyes;
8. Approximately nineteen 8-inch by 6-inch wyes;
9. Approximately 555 feet of 6-inch PVC service laterals (open cut);
10. Approximately 525 feet of 6-inch PVC service laterals (bored);
11. Approximately 160 feet of 4-inch PVC service laterals (open cut);
12. Approximately 4,130 cubic yards of special backfill;

13. Approximately 75 square yards of asphalt driveway repair;
14. Approximately 125 square yards of concrete driveway repair;
15. Approximately 900 square yards of asphalt pavement replacement;
16. Approximately two electrical service drops; and
17. Approximately 720 feet of electrical conductor cable.

E. Winchester Road – Kinnerk Road – Allison Avenue – Boggs Avenue Area sanitary sewer system includes:

1. Approximately 3,820 feet of 8-inch PVC sanitary sewer;
2. Approximately 1,780 feet of 2-inch PVC force main;
3. Approximately 765 feet of 1 ½ -inch PVC force main;
4. Approximately 15 manholes;
5. Approximately one air release valve manhole;
6. Approximately four cleanouts;
7. Approximately eight grinder pump stations rated at 30 gpm each with electrical connections and 1½-inch check valve assemblies;
8. Approximately 375 feet of 1½-inch pressure sewer line;
9. Approximately twenty-two 8-inch by 6-inch wyes;
10. Approximately 775 feet of 6-inch PVC service laterals (open cut);
11. Approximately 410 feet of 4-inch PVC service laterals (open cut);
12. Approximately 2,250 cubic yards of special backfill;
13. Approximately 200 square yards of asphalt pavement replacement;
14. Approximately 100 square yards of asphalt driveway repair;
15. Approximately 20 square yards of concrete driveway repair;
16. Approximately 1,650 square yards of asphalt pavement replacement;
17. Approximately four electrical service drops; and
18. Approximately 1,770 feet of electrical conductor cable.

F. Winters Road Area sanitary sewer system includes:

1. Approximately 885 feet of 8-inch PVC sanitary sewer;
2. Approximately 430 feet of 1 ½ - inch PVC force main;
3. Approximately four manholes;
4. Approximately seven 8-inch by 6-inch wyes;
5. Approximately one grinder pump station rated at 30 gpm with electrical connection and 1½-inch check valve assembly;
6. Approximately 45 feet of 1½-inch pressure service line (open cut);
7. Approximately sixty 8-inch by 6-inch wyes;
8. Approximately 155 feet of 6-inch PVC service laterals (open cut);
9. Approximately 60 feet of 4-inch service laterals (open cut);
10. Approximately five feet of 1 ½ - inch pressure sewer line;
11. Approximately 265 cubic yards of special backfill;
12. Approximately 15 square yards of asphalt driveway repair;
13. Approximately 45 square yards of stone driveway repair;
14. Approximately 65 square yards of asphalt pavement replacement; and
15. Approximately 20 feet of electrical conductor cable.

The preliminary design flow for each of the proposed new service areas is as follows:

- (1) Cedar Canyons Addition – Cedar Shores Addition --estimated average design flow of 32,860 gallons per day (gpd) and an estimated peak flow of 131,440 gpd;
- (2) Leo Road Area--estimated average design flow of 2,790 gpd and an estimated peak flow of 11,160 gpd;

- (3) Maples Road – Hughes Drive Area--estimated average design flow of 19,220 gpd and an estimated peak flow of 76,880 gpd;
- (4) Plantation Park Addition - Huguenard Road Area--estimated average design flow of 17,335 gpd and an estimated peak flow of 69,420 gpd;
- (5) Winchester Road – Kinnerk Road – Allison Avenue – Boggs Avenue Area --estimated average design flow of 14,985 gpd and an estimated peak flow of 59,940 gpd; and
- (6) Winters Road Area --estimated average design flow of 2,790 gpd and an estimated peak flow of 11,160 gpd.

The organic loadings associated with the raw sewage from each project area are assumed to be approximately:

5 day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>)--200 milligrams per liter (mg/l);  
Total Suspended Solids (TSS)--200 mg/l; and Ammonia-Nitrogen (NH<sub>3</sub>-N)--20 mg/l.

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

| <u>Project Areas</u>                                                 | <u>Estimated Cost</u>    |
|----------------------------------------------------------------------|--------------------------|
| 1. Cedar Canyons Addition – Cedar Shores Addition                    | \$1,800,000              |
| 2. Leo Road Area                                                     | 120,000                  |
| 3. Maples Road – Hughes Drive Area                                   | 650,000                  |
| 4. Plantation Park Addition – Huguenard Road Area                    | 690,000                  |
| 5. Winchester Road-Kinnerk Road-Allison Avenue-<br>Boggs Avenue Area | 450,000                  |
| 6. Winters Road Area                                                 | <u>85,000</u>            |
| Subtotal Construction Cost                                           | \$3,795,000              |
| Contingency                                                          | <u>285,000</u>           |
| Total Estimated Construction Cost                                    | <b>\$ 4,080,000</b>      |
| Total Non-Construction Cost                                          | <b>\$ <u>600,000</u></b> |
| <b>Total Estimated Project Cost</b>                                  | <b>\$ 4,680,000</b>      |

- B. ACRW&SD will borrow approximately \$4,305,000 from the State Revolving Fund (SRF) Loan Program for a 20-year term at a fixed interest rate to be determined at loan closing for the purposes of installing municipal sewer service in the six new service areas. Fort Wayne will pay approximately \$375,000 to the ACRW&SD for oversizing a portion of the collection system in both the Cedar Canyons Addition – Cedar Shores Addition Area and in the Planter Park Addition - Huguenard Road Area for future growth.

As part of an interlocal agreement that has not been finalized as of this date, the flow from the six areas will be treated at the Fort Wayne wastewater treatment plant and rates will be established. The SRF will not close the loan with the District until the interlocal agreement between the District and Fort Wayne is executed and submitted to the SRF.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The District evaluated the “No-Action” Alternative for all project areas and different sanitary sewer alternatives for two of the six project areas (Cedar Canyons Addition – Cedar Shores Addition, and Leo Road): The No-Action alternative was eliminated from consideration for all six project areas, since failing on-site septic systems would continue to discharge inadequately treated sewage into nearby streams or ditches and cause a potential public health problem.

Cedar Canyons Addition – Cedar Shores Addition; Leo Road Area: Both the low pressure grinder pump sewer system alternative and the combination gravity/low pressure grinder pump sewer system alternative were evaluated. Based on cost, the combination gravity/low pressure grinder pump sewer system was the selected alternative for these two areas.

Maples Road – Hughes Drive Area: Due to topography and the proximity of the homes to one another, the conventional gravity sewer system was the only alternative evaluated for this area.

Plantation Park Addition – Huguenard Road Area; Winchester Road – Kinnerk Road – Allison Avenue – Boggs Avenue Area; Winters Road Area: A combination of a mostly conventional gravity sewer system, coupled with a low pressure grinder pump system, was the only collection system alternative evaluated for these areas.

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

**Disturbed and Undisturbed Areas:** Some project areas may not have been disturbed by recent construction activity, and the District implemented an archaeological survey on those areas. The survey did not find significant archaeological materials. Most of the projects will be constructed within previously disturbed road rights-of-way or within disturbed utility corridors.

**Historical/Architectural Sites (Figures 25A through 30A):** The projects will not affect historic sites. If any visual or audible impacts to historic sites occur, they will be temporary and will not alter the characteristics that qualify historic properties for inclusion in or eligibility for the State or National registers. The SRF’s finding pursuant to Section 106 of the National Historic Preservation Act is: “no historic properties affected.”

In several areas, the proposed sanitary sewer system improvements will be located in close proximity to a historic cemetery, but will not affect those cemeteries. A proposed force main in the Cedar Canyons Addition-Cedar Shores Addition will be installed within 100 feet of the Robinson Chapel Cemetery. A proposed force main in the Maples Road-Hughes Drive Area will be installed along South Anthony Boulevard and be within 300 feet of the Lindlag Family Cemetery. Lastly, a proposed sewer will be installed in the vicinity of the Volz & Albright Cemeteries. The SRF’s finding pursuant to Section 106 of the National Historic Preservation Act is: “no historic properties affected.”

**Plants and Animals:** The construction and operation of the sanitary sewer projects will not negatively impact state or federally listed endangered species or their habitat. Few, if any, trees will be affected by the projects.

**Prime Farmland:** Two of the projects will affect prime/unique farmland.

**Wetlands** (Figures 25C through 30C): The proposed projects will not affect wetlands. A sewer line in the Cedar Canyons Addition – Cedar Shores Addition project area will cross Cedar Creek, a riverine wetland, by directionally drilling under the creek.

**100-Year Floodplain:** Portions of sewer or pressure lines in the Cedar Canyons Addition – Cedar Shores Addition and the Winters Road project areas will be in the 100-year floodplain; the lines will be underground and will not displace floodwaters. None of the other projects will be in a 100-year floodplain.

**Surface Waters:** The proposed projects will not affect Natural, Scenic and Recreational Rivers and Streams, Exceptional Use Streams, or Outstanding State Resource Waters. Cedar Creek is listed on the Indiana Department of Natural Resources “Outstanding Rivers of Indiana” list, but the proposed sewer line from the Cedar Canyons Addition – Cedar Shores Addition will be directionally drilled under it, rather than open cut through the stream.

**Groundwater:** The proposed projects will not impact groundwater. Dewatering during excavation of sewer trenches or grinder pump stations may occur in those areas with a high groundwater table.

**Air Quality:** The proposed projects will not adversely affect air quality, other than temporary impacts due to dust and emission.

**Open Space and Recreational Opportunities:** The proposed project's construction will neither create nor destroy open space and/or recreational opportunities.

**National Natural Landmarks:** The construction and operation of the proposed projects will not impact National Natural Landmarks.

The project will not affect the Lake Michigan Coastal Management Zone.

## **B. Secondary Impacts**

The District's Preliminary Engineering Report (PER) states: *The proposed sanitary sewer system projects will allow the District to provide sewer service to [six] new regions outside of established municipal service areas. The new sanitary sewage systems will eliminate failing, on-site septic systems and provide users with municipal sanitary sewer service. It is unknown whether or not these sanitary sewer systems will create or attract new development. It is dependent more so on the location of the service area and the availability of undeveloped land adjacent to the sewers within the new service area. The District will ensure, through the authority of its Board and local zoning laws, that future development will not adversely impact environmental sensitive areas by enforcing the requirements and guidelines of the IDNR, U.S. Fish & Wildlife Service, IDEM, and the Allen County Drainage Board.*

## **C. Comments from Environmental Review Authorities**

This document serves as the first notice to the State Historic Preservation Officer, the Indiana Department of Natural Resources Environmental Unit and the U. S. Fish and Wildlife Service.

In correspondence dated March 24, 2009, the Natural Resources Conservation Service stated: *The revised project to construct new sanitary collection sewers, pump stations, grinder pump stations and transmission mains in the City of Fort Wayne, Allen County, Indiana, as referred to in your letter dated March 11, 2009, will cause a conversion of prime farmland. The Farmland*



Conversion Impact Rating Form AD-1006 indicated that the Cedar Canyons Addition – Cedar Shores Addition and the Maples Road – Hughes Drive Area will each cause a conversion of approximately 0.02 acres of prime farmland.

## VIII. MITIGATION MEASURES

The District's PER lists the following mitigation measures:

*The project areas will comply with IDEM's Rule 5 requirements with respect to the mitigation of soil erosion and a detailed plan will be submitted for approval with the completed plans and specifications.*

*Mitigation measures cited in typical comment letters from the Indiana Department of Environmental Management concerning the use of straw bale barriers, silt fencing or earthen berms to prevent soil erosion will be incorporated into the erosion control plans and specifications and implemented during construction.*

*Mitigation measures to lessen impacts to wetlands during construction typically cited in comment letters from the Indiana Department of Environmental Management, the Indiana Department of Natural Resources and the U.S. Fish & Wildlife Service will be implemented. Permits will be solicited, if necessary, from the Army Corps of Engineers and the IDNR.*

*Exhausts of construction equipment will be required to have mufflers for noise and air pollution abatement.*

*All bare and disturbed areas will be revegetated with a mixture of grasses and legumes upon completion of construction.*

*To minimize non-conformance with 326 IAC 6-4, "Fugitive Dust Emissions", reasonable and proper construction techniques and clean-up practices will be provided. In addition, wetting, sweeping streets and/or chemical stabilizers (calcium chloride) will be used to control dust generated during all phases of the proposed projects. Open burning of construction debris will not be permitted.*

*Mitigation measures typically cited in comment letters from the Indiana Department of Environmental Management, the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.*

## IX. PUBLIC PARTICIPATION

A properly publicized public hearing was held at 12:30 p.m., on March 25, 2009, at the Commissioner's Courtroom Room 200 located at the Fort Wayne City-County Building. During the discussion, the District and its consultant said that the concept of centralized treatment has been eliminated from consideration. An attendee raised the issue of crossing Cedar Creek and noting that the District should contact conservation groups in that area to inform them of the District's plans to directionally drill under the creek.